Kit Contents: OEM Audio Plus Reference 500CF

Item 1	Item 2	Item 3	Item 4	Item 5	Item 6	Item 7

Item 8	Item 9	Item 10	Item 11	Item 12	Item 13	Item 14

Hardware Content		
Item	**Quantity**	**Description**
1	2	1" Soft Dome Tweeter with Neodymium Magnet
2	2	6.5" Carbon Fiber Woofer
3	2	5.25" Carbon Fiber Coaxial rear Speaker
4	2	8" Carbon Fiber Subwoofer in Custom Fit Sealed Enclosure, Driver Side
5	1	8" Carbon Fiber Subwoofer in Custom Fit Sealed Enclosure, Passenger Side
6	1	Amplifier Module (1) DSP Amplifier (2) Subwoofer Amplifier
7	1	Long Arm for Amp Bracket
8	1	Quick-Sync Harness
9	1	Driver Side Subwoofer Umbilical cable
10	1	Passenger Side Subwoofer Umbilical Cable
11	1	Fuse Holder Assembly, (1) 30-Amp Fuse, (2) 20-Amp Fuses
12	3	Brackets A, B ,C, D, and (8) Screws
13	12	Rivets
14	1	Corrugated Loom
15	10	Cable Ties (Not pictured)

Recommended Tools	
Personal & Vehicle Protection	**Notes**
Safety Goggles	
Seat Covers	
Floor Covers	
Protective Blanket	
Safety Gloves	
Special Tools	**Notes**
Panel Clip Removal	SST # 00002-06001-01
Socket Wrench	
Sockets	10mm, 12mm, 14mm
Socket Extension	6"
Screwdriver	#2 Phillips
Side Cutters	
Rivet Tool	Use 1/8" Nose
Drill	
5/32" Drill Bit	
T25 Torx bit	
5mm Hex Bit or Allen Wrench	
Wire Strippers/Crimpers	Needed for 12g & 14g butt Sealed-Crimp-Solder Connectors
Heat Gun	Needed for 12g & 14g
Installation Tools	**Notes**
Masking Tape	
Foam Tape	
Cable Ties	**10 Piece bundle Included**
Special Chemicals	**Notes**
Lubricant	For Pulling Wire Through Grommet
Silicone Sealant	For Sealing Grommet
Personal & Vehicle Protection	**Notes**

Legend	
	STOP: Damage to the vehicle may occur. Do not proceed until process has been complied with.
	TOOLS & EQUIPMENT: Used in Figures to call out the specific tools and equipment recommended for the process.

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Accessory Installation Practice (read before installation)

Care must be taken when installing this accessory to ensure damage does not occur to the vehicle. The installation of this accessory should follow approved guidelines to ensure a quality installation.

These guidelines can be found in the "Accessory Installation Practices" document.

This document covers such items as:

- Vehicle Protection (use of covers and blankets, cleaning chemicals, etc.)
- Safety (eye protection, checking torque procedure, etc.)
- Vehicle Disassembly/Reassembly (panel removal, part storage, etc.)
- Electrical Component Disassembly/Reassembly (battery disconnection, connector removal, etc.)

Please see your Toyota/Scion/Lexus dealer for a copy of this document.

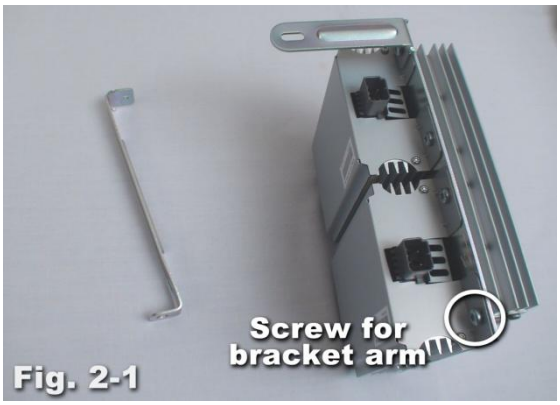
Revisions and other installation assets

OEM Audio Plus is committed to providing components and instructions designed for seamless integration. Please visit oemaudioplus.com for the most up to date installation related documents and media,

Important Warranty Information

Failure to completely and properly fill out online Warranty Registration may result in possible reduction or complete denial of future warranty claims. Complete yours today at: **oemaudioplus.com/registration** or call: **855 OEM-ODIO** for more details and alternative methods of system registration.

1. **Vehicle Preparation**
   - **a.** Apply parking brake.
   - **b.** Disconnect the negative (-) battery cable.
   - **c.** Prepare a protective surface to place all vehicle components on.



2. **Installation Prep for Amplifier Assembly**
   - **a.** Remove the Amplifier Assembly and bracket arm from the box. **(Fig. 2-1)**
   - **b.** Using a ***T-25 Torx*** bit, remove the screw located at the bottom of the Assembly and install the bracket arm. **(Fig. 2-2)**
   - **c.** Re-install the screw and tighten.

3. **Installation Prep for Subwoofers**
   - **a.** Using a 5mm hex bit, install the subwoofer brackets to the subwoofer enclosures. The brackets and enclosures are marked **"A", "B", "C",** and **"D".** Install bracket **"A"** to location **"A"** on the enclosures, then **"B"** to **"B",** and so forth. **(Fig. 3-1)**

4. **Initial Vehicle Disassembly**
   - **a.** Remove Door Panels
     1. Disengage the small trim panel behind the interior door handle using an appropriate panel tool. **(Fig. 4-1)**

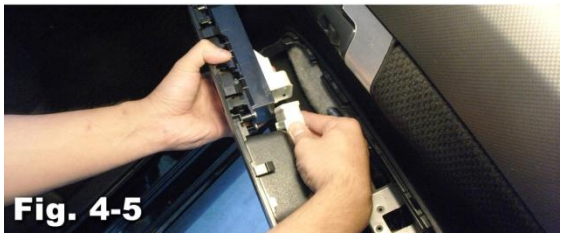
2. Use a #2 Phillips screwdriver to remove the screw behind the trim panel. **(Fig. 4-2)**

3. Use a #2 Phillips screwdriver to remove the screw securing the power window/door lock controls. **(Fig. 4-3)**

4. Remove tweeter housing by pulling straight and away from door. Unplug tweeter connector and set aside. **(Fig. 4-4) NOTE: For front doors only.**

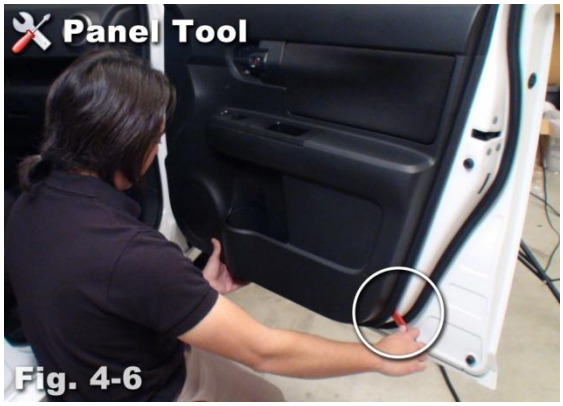
5. Use a panel tool to remove the window/door lock control panel. Insert tool between the front edge of the panel and then the sides to remove. **(Fig. 4-5)**

6. Disconnect window/door lock control connectors from the panel and re-install back in place. (**Fig. 4-5)**



7. Use panel tool to disengage the clips behind the door panel one at a time. Start at the bottom, then the sides and finish at the top. **(Fig. 4-6)**

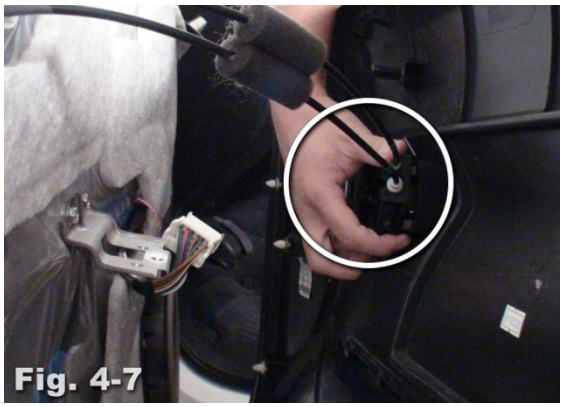
   Note: Use gentle force to remove door panel.



8. Remove door latch assembly from door panel. **(Fig. 4-7)**

9. Carefully remove entire door panel and set aside on a protective blanket. Repeat this process for remaining doors.

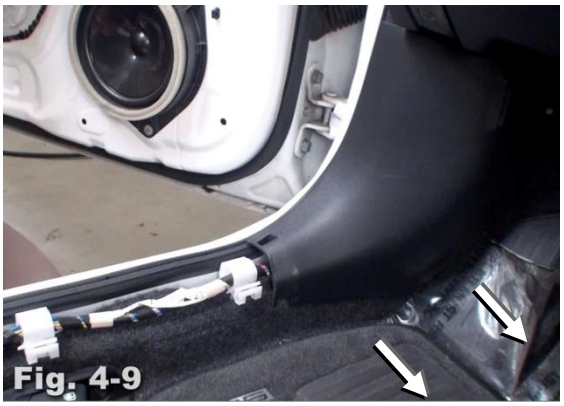
   Note: Some door panel snaps may still be attached to the sheet metal. Remove the snaps using the forked end of your panel tool and place it back on the door panel.



b. Remove Front Driver and Front Passenger Side Threshold Panel. **Fig. 4-8)**

   Note: Disengage both ends of the panel before pulling upward.

c. Remove Driver and Passenger Kick Panel Trim by disengaging snaps and pulling away from position. **(Fig. 4-9)**



5. Door Speaker Removal and Installation

a. Speaker Removal

Note: Make sure to note speaker connector orientation then unplug speaker connector. (Fig. 5-1)

1. Use a 5/32" drill bit to remove the three rivets holding factory speaker. **(Fig. 5-2)**
Note: *Start by applying light drilling pressure and progressively increase force as necessary towards the end.*

2. After drilling, remove rivet debris inside the door cavity. **(Fig. 5-3)** Repeat for remaining door. **Note:** *Failure to remove debris may induce noise.*

b. Speaker Installation

NOTE: Use the OEM Audio Plus 6.5-inch woofers for the front doors and the OEM Audio Plus 5.25-inch coaxial speakers for the rear doors.

1. Using a rivet tool, install supplied *rivet fasteners* to mount OEM Audio Plus speaker and connect speaker connector. Repeat for remaining doors. **(Fig. 5-4)**

2. Install door panels in the reverse order.

c. Tweeter Removal and Installation

1. Carefully remove the factory tweeter from the sail panel by unlocking the three prongs one at a time. **(Fig. 5-5)**

Fig. 5-5

2. Carefully push out the tweeter grill from the rear of the sail panel. **(Fig. 5-6)**

Note: This is necessary to allow inspection of the tweeter installation.

Fig. 5-6

3. Carefully apply pressure to the tweeter foam gasket and push outwards prior to installation. **(Fig. 5-7)**

Note: This will prevent blockage of the tweeter during installation.

Fig. 5-7

4. Insert the OEM Audio Plus Tweeter in place and make sure the foam gasket is not causing any blockage. **(Fig. 5-8)**

5. Reinstall the tweeter grill to sail panel, connect tweeter connector, and install tweeter housing to the door. Repeat for other door.

Fig. 5-8

6. Quick-Sync Harness Installation

a. Glove Box Removal

1. Open glove box and disengage the glove box damper on the right side. **(Fig. 6-1)**

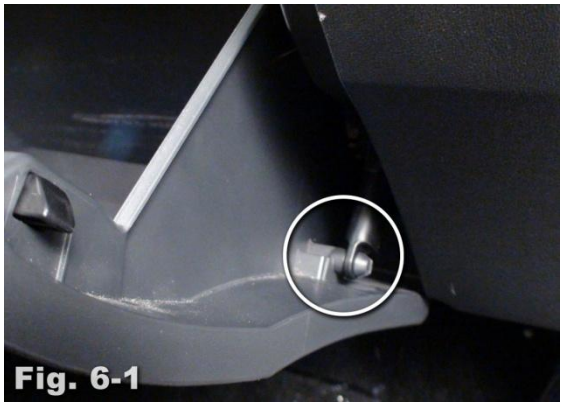


Fig. 6-1

2. Squeeze sides of glove box and pull down and out in one motion to remove. **(Fig. 6-2)**

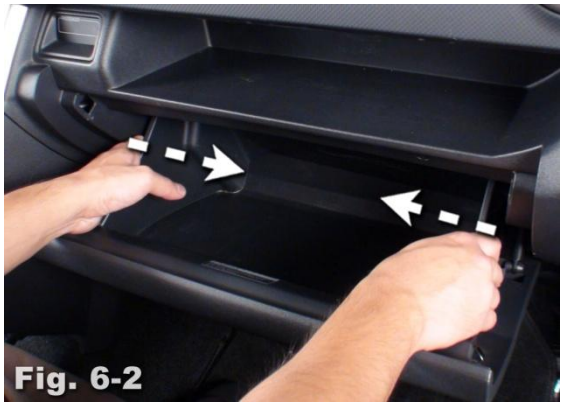


Fig. 6-2

b. Radio Removal

1. Lay down protective blanket over climate controls and transmission area.

2. To remove the radio trim panel, open the two vents on the sides of the radio, reach your fingers inside the vents, and pull straight out. **(Fig. 6-3)**

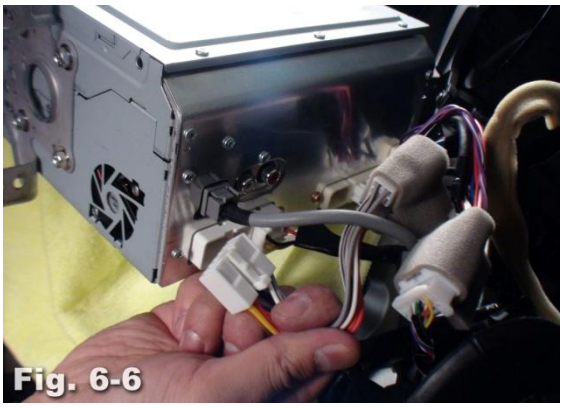
Fig. 6-3

3. Remove the small trim piece below the radio by pulling straight out. **(Fig. 6-4)**

Fig. 6-4

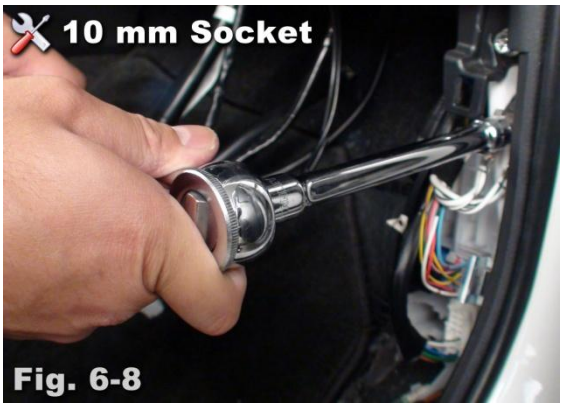
4. Using a 10mm socket wrench, remove the four (4) bolts holding the radio in place. **(Fig. 6-5)**

5. Disconnect connectors and antenna lead. **(Fig. 6-6)**
6. Remove radio and store.



c. Run the Passenger-side of Quick-Sync Harness and Driver-side Subwoofer Umbilical Cable.
   1. Enter through the radio cavity and run harness together with the driver side subwoofer umbilical cable (white 4-pin connector first) through the space above the air conditioning unit in the direction of the passenger side kick panel. Run neatly and out of the way. Use cable ties as necessary. **(Fig. 6-7)**

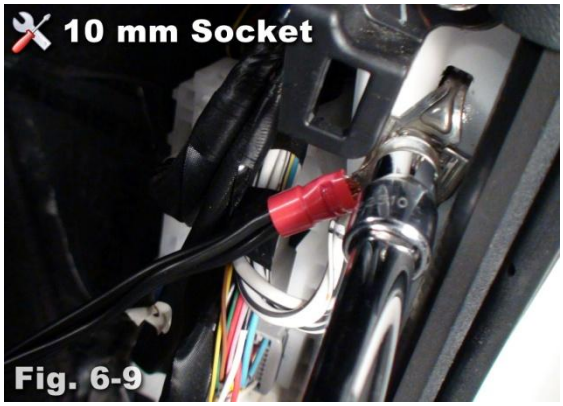
   2. Locate and remove the 10mm ground bolt located in the passenger side kick panel area. **(Fig. 6-8)**



3. Install the harness ground together with the factory ground.

Note: Make sure harness ground terminal rests on top of the factory ground.

4. Re-install the 10mm bolt and tighten. **(Fig. 6-9)**

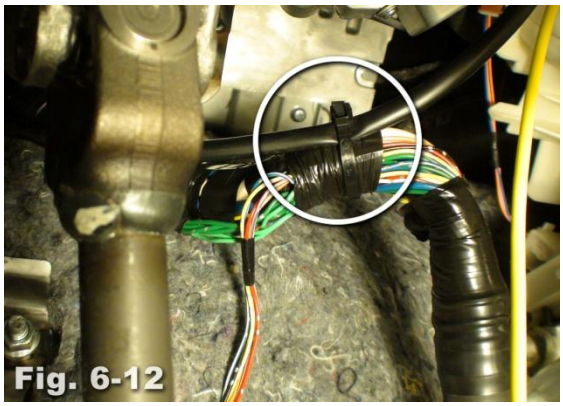


d. Run driver side of Quick-Sync Harness and driver side subwoofer umbilical cable.

1. Enter through the radio cavity and run the yellow power wires together with the driver side subwoofer umbilical cable towards the accelerator pedal. **(Fig. 6-10)**

2. Lay the (3) yellow power wires on the floor. **(Fig. 6-11)**

3. Finish routing the driver side subwoofer umbilical cable above the accelerator pedal and steering column into the driver side kick panel. Run neatly and out of the way. Use cable ties as necessary. Leave the extra slack on the floor for now. **(Fig. 6-12)**

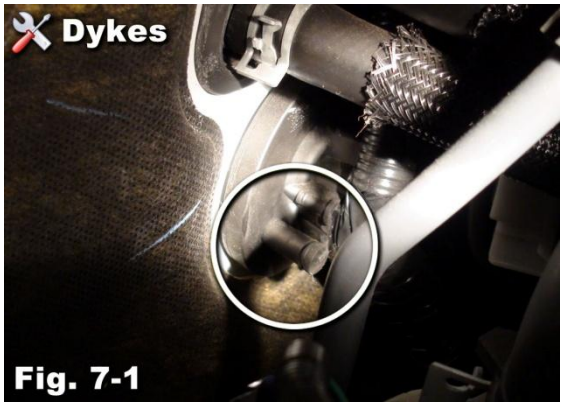


7. Power Wire Installation

a. Under the hood.

1. Locate the grommet for the main factory wiring harness on the driver side of the firewall directly under the two (2) heater hoses.

2. Identify unused nipple and slice the tip off to create an opening for the power wire. **(Fig. 7-1)**



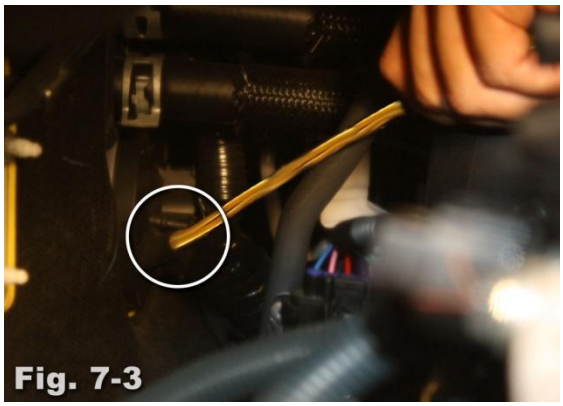
b. Under dash area (Driver side)

1. Lubricate power wire with *silicone spray* or comparable substitute.

2. Run entire length through the grommet. **Note:** Avoid interference with accelerator and brake pedals. **(Fig. 7-2)**

3. Pull back approximately 6" of the wire and apply a small amount of *silicone sealant* on the wire to seal the grommet opening.

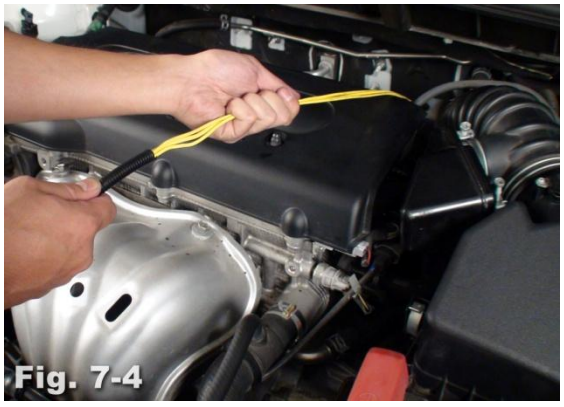
4. Push back entire length. **Note:** Inspect grommet from the engine compartment and verify seal. **(Fig. 7-3)**



5. Once the power wire installation is completed under the dash area, secure any wire slack to existing factory wiring. Use cable ties as necessary.

c. Under hood wiring routing.

1. Install supplied high-temp corrugated split loom to cover the power wires and insulate against extreme temperature under the hood. **(Fig. 7-4)**



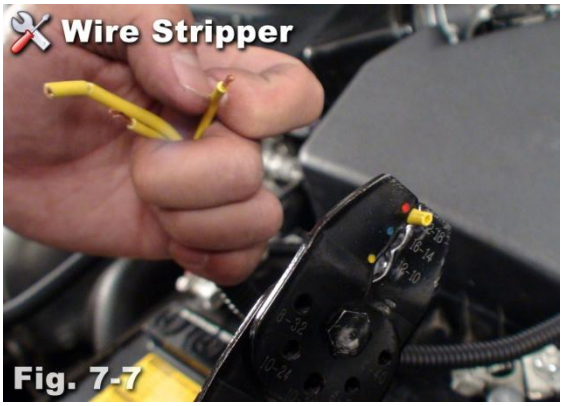
2. Run power wires to the battery by following the direction of the factory wiring harness to the ECU. **(Fig. 7-5)**

3. Continue in between the ECU and Air Filter Box and end by the battery. Secure using cable ties as necessary.

d. Installation of the Fuse Holder

1. Remove the 10mm bolt from the battery's positive terminal and install the ring terminal of the fuse holder lead. Re-install the 10mm bolt and tighten. **Note: *Do not install fuses at this time!*** **(Fig. 7-6)**

2. Connect the power wires to the fuse holder using the pre-installed butt connectors. Use wire stripper and strip 3/8" off the end of each power wire. **(Fig. 7-7)**



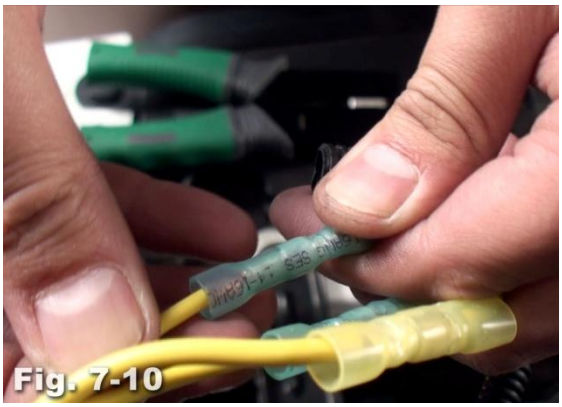
3. Start with the (*larger*) 12 ga. power wire by inserting it into the Yellow butt connector. **(Fig. 7-8)**

Note: Use appropriate Crimp Tool

4. Apply heat to activate the solder and heat shrink insulator for the best connection possible. **(Fig. 7-9)**

5. Insert 14 ga. wire into the Blue butt connector and crimp. **(Fig. 7-10)**

   Note: Use appropriate Crimp Tool



6. Apply heat to activate the solder and heat shrink insulator for the best connection possible. **(Fig. 7-11)**

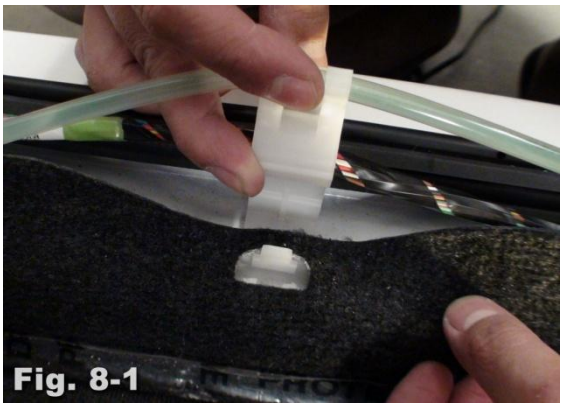
7. Secure using cable ties as necessary.

e. **Repeat for the other 14 ga. Power wire.**

8. **Install Subwoofer Umbilical Cables** **(...continue from Section 6, Step D-3-pg. 10)**

   a. Driver side subwoofer umbilical cable

      1. Unfasten white plastic carpet clips along the threshold area and lift carpet edge to expose cable route. **(Fig. 8-1)**



2. Run the cable under the carpet and exit under the seat through the opening used by the existing factory wiring. **(Fig 8-2)**

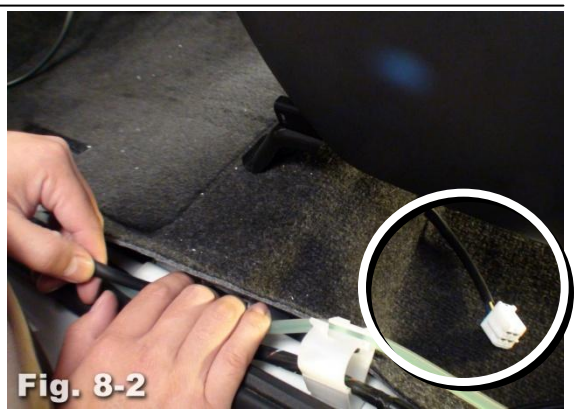


Fig. 8-2

b. Passenger side subwoofer umbilical cable

1. Run the passenger side subwoofer umbilical cable (shorter cable) through the passenger side kick panel area with the white 4-pin connector first. **(Fig. 8-3)**

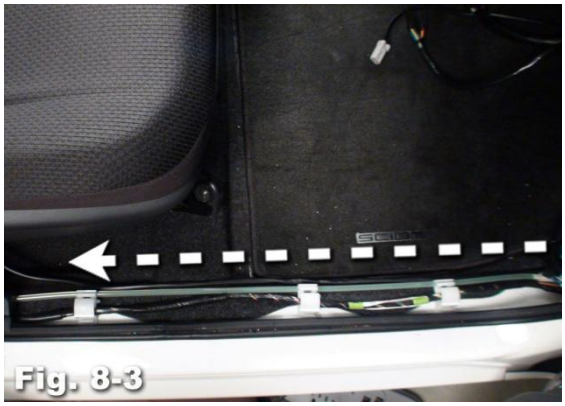


Fig. 8-3

2. Unfasten white plastic carpet clips along the threshold area and lift carpet edge to expose cable route. **(Fig. 8-4)**

Fig. 8-4

3. Run the cable under the carpet and exit under the seat through the opening used by the existing factory wiring. **(Fig 8-5)**

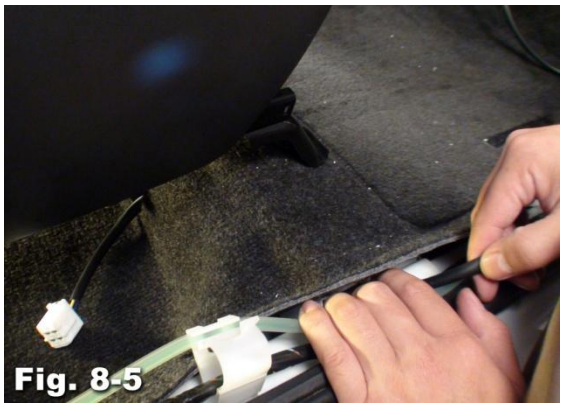
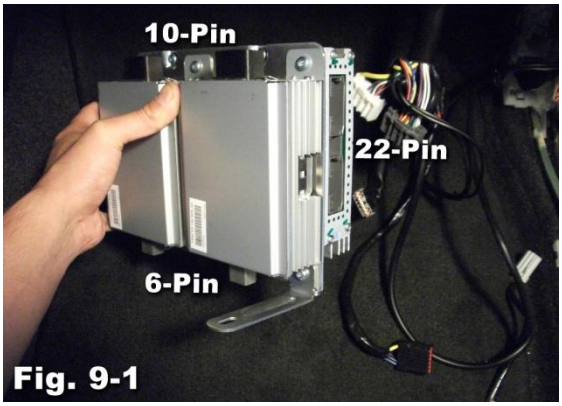


Fig. 8-5

9. Amplifier Assembly Installation

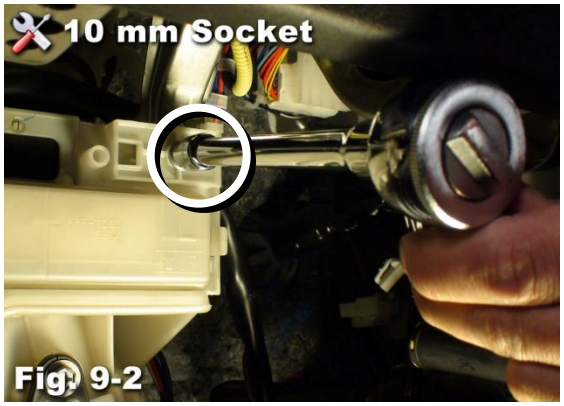
a. Connecting the DSP and Sub Amplifiers **(Fig. 9-1)**

1. Plug the White and Gray 22-pin connectors from the Quick-Sync Harness into their designated receptacles on the DSP Amplifier.
2. Plug the Black 10-pin connector from the Quick-Sync Harness into its designated receptacle on the Sub Amplifier.
3. Plug the 6-pin Gray connector from the Sub cable into its designated receptacle on the Sub Amplifier.
4. Repeat steps for the other sub amplifier.

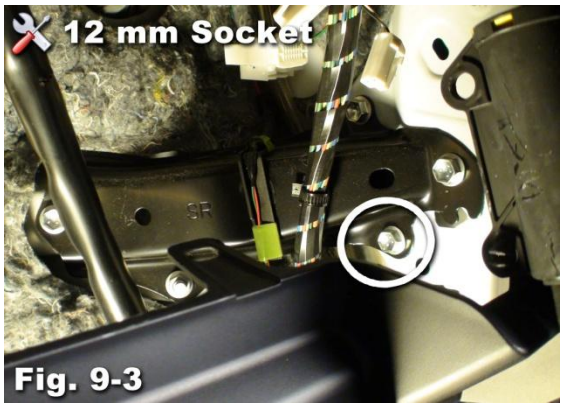


b. Mounting the Amplifier Assembly

1. Remove the outward-facing 10mm bolt used on the a/c blower unit. **(Fig. 9-2)**

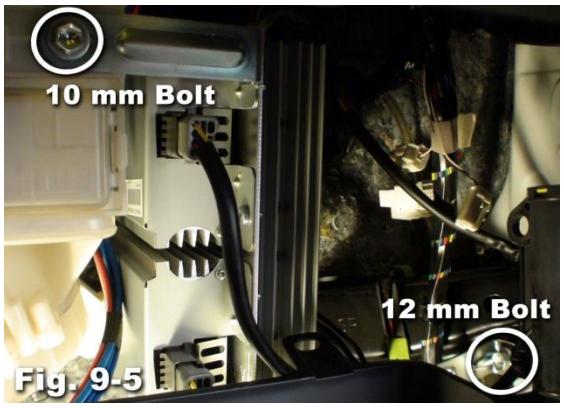


2. Remove the lower side-facing 12mm bolt off the black chassis reinforcement bracket located above the passenger side kick panel. **(Fig. 9-3)**



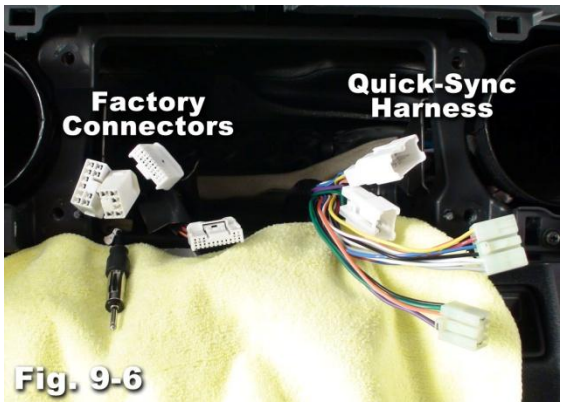
3. Carefully insert Amplifier Assembly through the bottom opening underneath the glove box cavity. **(Fig. 9-4) Note:** Tilt Amplifier Assembly to the right to clear long mounting arm and slip into the designated mounting location.

4. Line up each bracket arm to their corresponding mounting positions. **(Fig. 9-5)**
5. Upper Short Arm to 10mm bolt location
6. Lower Long Arm to 12mm bolt location
7. Turn the bolt by hand initially. If binding occurs remove the bolt and repeats steps.
8. Use socket wrench to tighten. **Note:** *It may help to push the lower arm towards the firewall while installing the 12mm bolt.*



c. Connect the Quick-Sync Harness into the Radio and factory harness using the designated connectors. **(Fig. 9-6)**

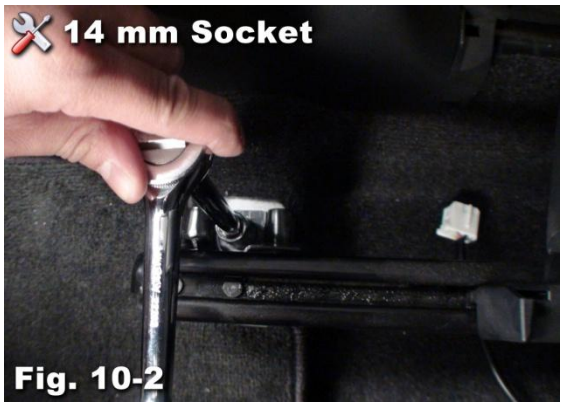
d. Re-install radio, trim panels, and glove box in reverse order. **Note:** Refer to Pg 7, Step 7, Section B.



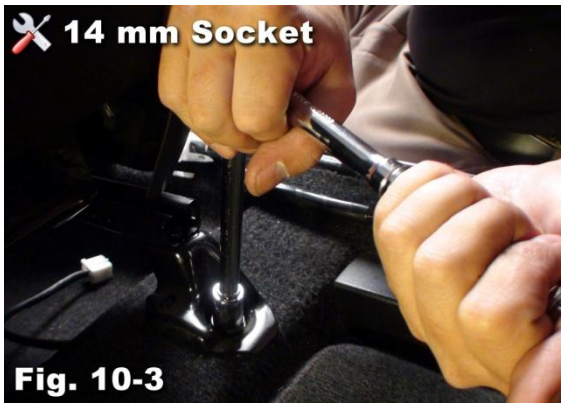
10. Loosen Driver and Passenger Seat

a. Slide the seats forward and remove the trim panels covering the seat bolts on the rear side of the seats. Locate the slots in the trim covers and pry them off using the forked end of your trim tool. **(Fig. 10-1)**

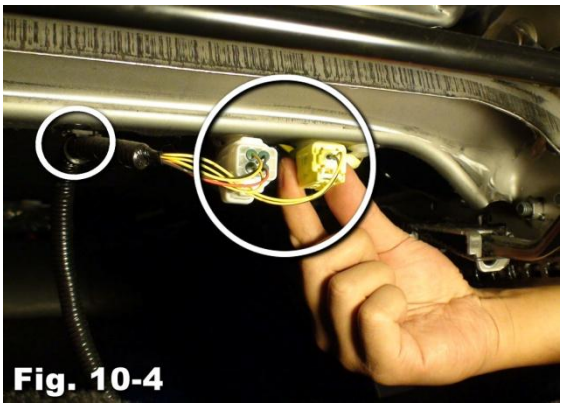
b. Using a 14mm socket with a 6" extension, remove the two rear 14mm seat bolts. **(Fig. 10-2)**



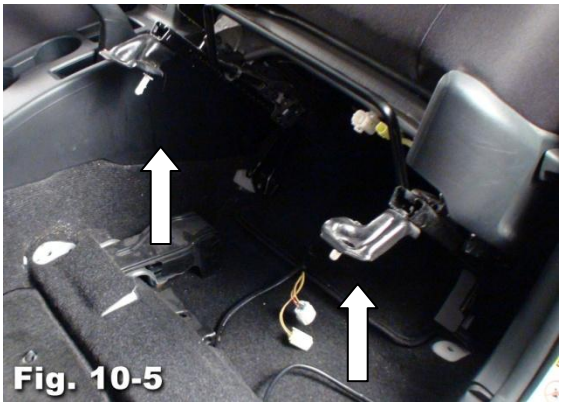
c. Slide seats to the rear and remove the ~~last~~ two front 14mm seat bolts. **(Fig. 10-3)**



d. Disconnect the two connectors underneath the seat and remove the cable mounting clip. **(Fig 10-4)**



e. Tilt the seats towards the rear of the car. **(Fig. 10-5)**



11. Subwoofer Installation

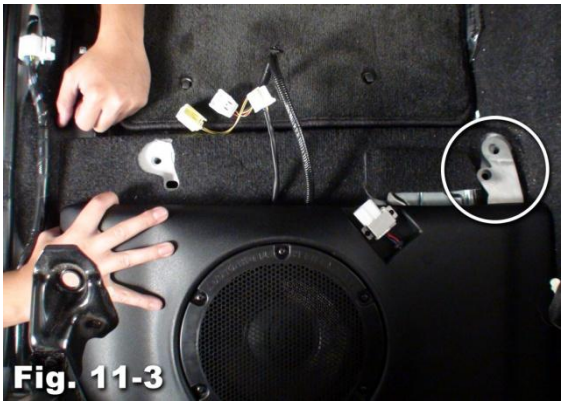
a. Remove the black metal cover under the driver seat. **Note: For driver side only.**

1. Use a 12mm socket to remove the two bolts holding the black metal cover under the driver's seat. **(Fig. 11-1)**

2. Remove the black metal cover and re-install the two 12mm bolts. **(Fig. 11-2) Note: The subwoofer enclosure will now act as a protective cover instead of the black metal cover.**

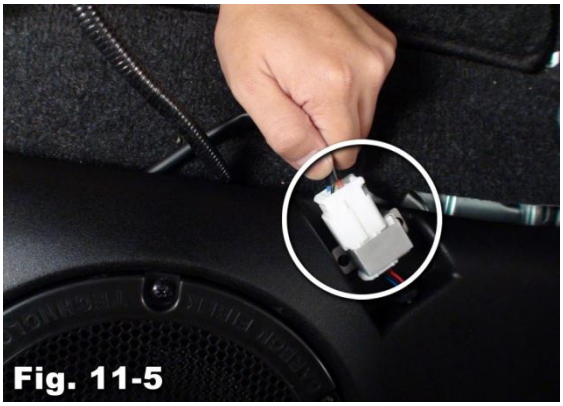
b. Install the Subwoofers

1. Install the Driver-side subwoofer on the floor with **Bracket A** facing the front of the car. **Note: For driver side only. (Fig. 11-3)**



2. Install the Passenger-side subwoofer on the floor with Bracket C facing the front of the car. **Note:** For passenger side only. **(Fig.11-4)**

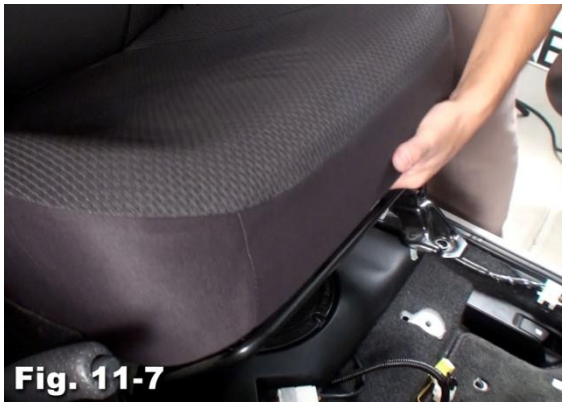
3. Plug the subwoofer umbilical cables to the subwoofers. **(Fig. 11-5)**



4. Make sure that the enclosure is nestled in place and the holes on both brackets are lining up with the seat bolt holes in the car. **(Fig. 11-6)**

5. Very carefully return the seat back to its original position – After returning the seat back in place, confirm that the seat bolt holes are lining up. **(Fig. 11-7)**

6. Tighten the seat bolts by hand at first to ensure proper alignment. If there is too much resistance, start over again and double check the alignment.



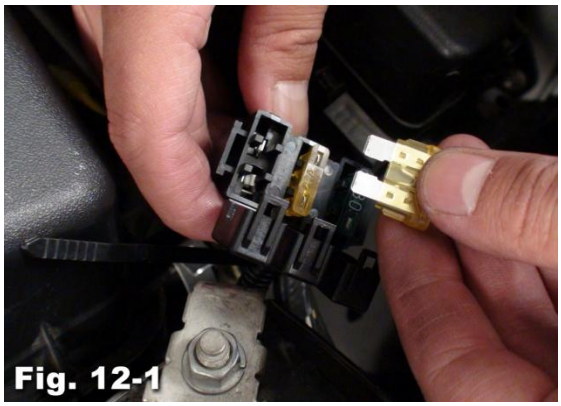
7. Finish tightening all four seat bolts using your 14mm socket and ratchet. (**Fig. 11-8)**

8. Install the trim covers for the rear seat bolts. **(Fig. 11-9)**

9. Re-install carpet, kick panel cover, and threshold trim in reverse order.

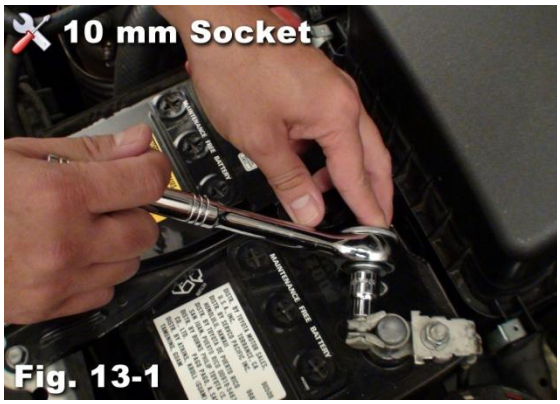
12. Fuse Installation

a. Insert the *20A* fuses for the 14 ga. power wires (thinner wires) and the *30A* fuse for the 12 ga. power wire. **(Fig. 12-1)**



13. Connect Battery ground (-). (Fig. 13-1)

14. Set Clock to correct time.



15. Verify Radio Settings.

a. *Pioneer Base Radio* (PT546-00120)

1. Turn radio off then press and hold *"settings"* Select *"Car Type"*> ***"tC"*** in *"Setup"* **(Fig. 15-1)** (Pg 52 Radio owner's manual) **NOTE: Even though this car is an xB, this setting must be set at tC. Only the tC setting allows FULL-RANGE OUTPUT.**

2. Select *"Natural"* setting in the *SSP Menu.* **(Fig. 15-2)** (Pg 9 Radio owner's manual)

b. *Pioneer Premium Radio* (PT546-00121)

1. Turn radio on and select *"Car Type"* > ***"tC"*** in *"System settings"* **(Fig. 15-3)** (Pg 57 Radio owner manual) **NOTE: Even though this car is an xB, this setting must be set at tC. Only the tC setting allows FULL-RANGE OUTPUT.**

Fig. 15-3

2. Select *"Natural"* setting in the *"SSP Menu"* **(Fig. 15-4)** (Pg 57 Radio owner manual)

Fig. 15-4

c. *Aisin SNS 200* (NSDA-W10U)

1. Turn radio on and select *"Off"* setting in the *"SSP Menu"* **(Fig. 15-5)** (Pg 187 Radio owner manual) **NOTE: This setting allows the purest sound quality.**

Fig. 15-5

2. Verify *"Parametric EQ"* is set to *"Flat"* **(Fig. 15-6)** (Pg 185 Radio owner manual)

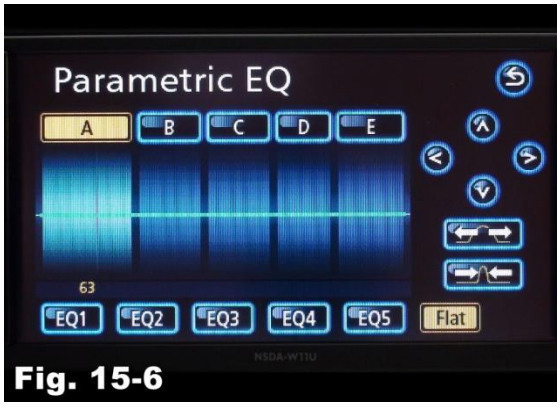


Fig. 15-6

3. Verify the Fader/Balance settings are centered. **(Fig 15-7)**

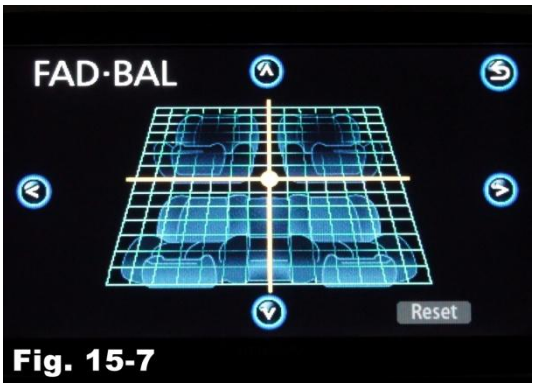


Fig. 15-7

4. Verify the Focus settings are centered. **(Fig. 15-8)**

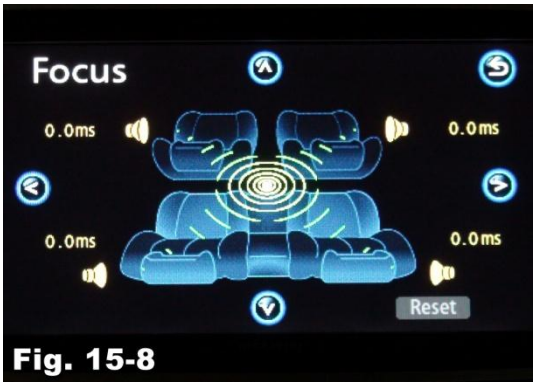


Fig. 15-8

16. **This concludes the OEM Audio Plus Reference 500CF Installation**
    a. Start your engine.
    b. Turn on your radio.
    c. Enjoy!

Checklist –These points **MUST** be checked to ensure a quality installation.

✓	Check:	Vehicle Function Detail:
	Power Windows	**Verify power window controls are functioning properly.**
	Power Door Locks	**Verify power door lock controls are functioning properly.**
	Hazard Lights	**Verify hazard lights are functioning properly.**
	Clock	**Verify proper time on clock.**
	Radio	**Verify radio is functioning properly.**
	Navigation (if applicable)	**Verify navigation system is functioning properly.**
	Bluetooth (if Applicable)	**Verify Bluetooth is functioning properly.**

Revisions and other installation assets

OEM Audio Plus is committed to providing components and instructions designed for seamless integration. Please visit oemaudioplus.com for the most up to date installation related documents and media,

Important Warranty Information

Failure to completely and properly fill out online Warranty Registration may result in possible reduction or complete denial of future warranty claims. Complete yours today at: **oemaudioplus.com/registration** or call: **855 OEM-ODIO** for more details and alternative methods of system registration.